Remediation of a Wood Treatment Site in Texas

David Abshire (Region 6 RPM) is considering a creative phased approach to remediate DNAPL, LNAPL, and dissolved phase at a wood treatment site in Texas. The approach combines containment of the source on three sides (open upgradient), evapotranspiration to control (and slow) the incoming ground water, and biodegradation of the dissolved phase within the "treatment cell." If successful, this approach would significantly decrease LTRA and O&M costs by eliminating the need for extraction wells and an engineered cap to control infiltration (i.e., head buildup) within the wall. In addition, the remedy would not trigger the stringent surface institutional controls usually required for a cap. To be able to model the dynamics of such a system, David requested contacts and further information on evapotranspiration rates for various tree types; rates verses tree maturity; and what trees would be recommended to reach a water table at 6 feet.

Ed Mead (USACE) recommended that David consider a combination of hybrid poplars and cottonwoods or willows. Poplars evapotranspirate large amounts of water, but require significant maintenance. Forum members suggested that David contact the following people for more information:

1. Steve Rock in Cincinnati (tel: 513-569-7149; email: rock.steven@epa.gov);
2. Steve McCutcheon in the Ecosystems Research Division of EPA's Athens lab (tel: 706-355-8235; email: mccutcheon.steven@epa.gov);
3. Marisa Latady (tel: 307-777-7541; email: mlatad@state.wy.us) at Wyoming DEQ;
4. The former Midwest HSRC at Kansas State University (where they were conducting research on the use of poplars in phytoremediation); and
5. Jerry Schnorr at the University of Iowa.

Bernie Schorle (Region 5) said there is an internet seminar on phytoremediation on Thursday, May 2, 2002. If any other EF members have suggestions for David, they should contact him directly (tel: 214-665-7188; email: abshire.charles@epa.gov).